

Work Order ID 91458

October-10-12 1:03:40 PM

91458

Page 1

Item ID: D4542-5

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Retainer, Inner

Start Date: 10/10/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 10/12/2012 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12-10-10* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr Revision Nbr

D4542 C

100 0.00

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

1- Cut as per dwg

Prog rev: C

Dwg rev: C

2- Deburr

110 QC2- Inspect parts off machine FAI/FAIB 0.00

110

QC

Memo

0.00

Quality Control

30 0 Jm 12-11-06

30 0 Jm 12-11-06

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 91458

91458

Page 2

October-10-12 1:03:40 PM

Item ID: D4542-5

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Retainer, Inner

Start Date: 10/10/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 10/12/2012 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

130

Identify as per dwg & Stock Location

0.00

130

Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

Alodine
QC3

8/1/03

DAS
15
12/11/07

28
28
28x

BR 12-11-7.

12-11-7

12/11/8
MC 12-11-08

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Picklist Print

October-10-12 1:03:43 PM

Page 1

Work Order ID: 91458

91458

Parent Item: D4542-5

D4542-5

Parent Item Name: Retainer, Inner

Start Date: 10/10/2012

Required Date: 10/12/2012

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP revA 12.01.04 New Issue EC verified by:DD IPP REV:B
12.02.24 as per dwg revA DD verf:EC IPP REV:C 12.05.08 as
per dwg revB DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6S.032

Purchased

No

100

sf

700.0600

0.208

~~6568421~~

M6061T6S 032

6.6

6061-T6 Sheet 0.032"

Jan 12-11-06

Location

Loc Qty

Loc Code

MAT021

700.06

121099

85.97

122256

40.89

122737

30.1

123097

91.1

123135

96

123137

356

123483

123483

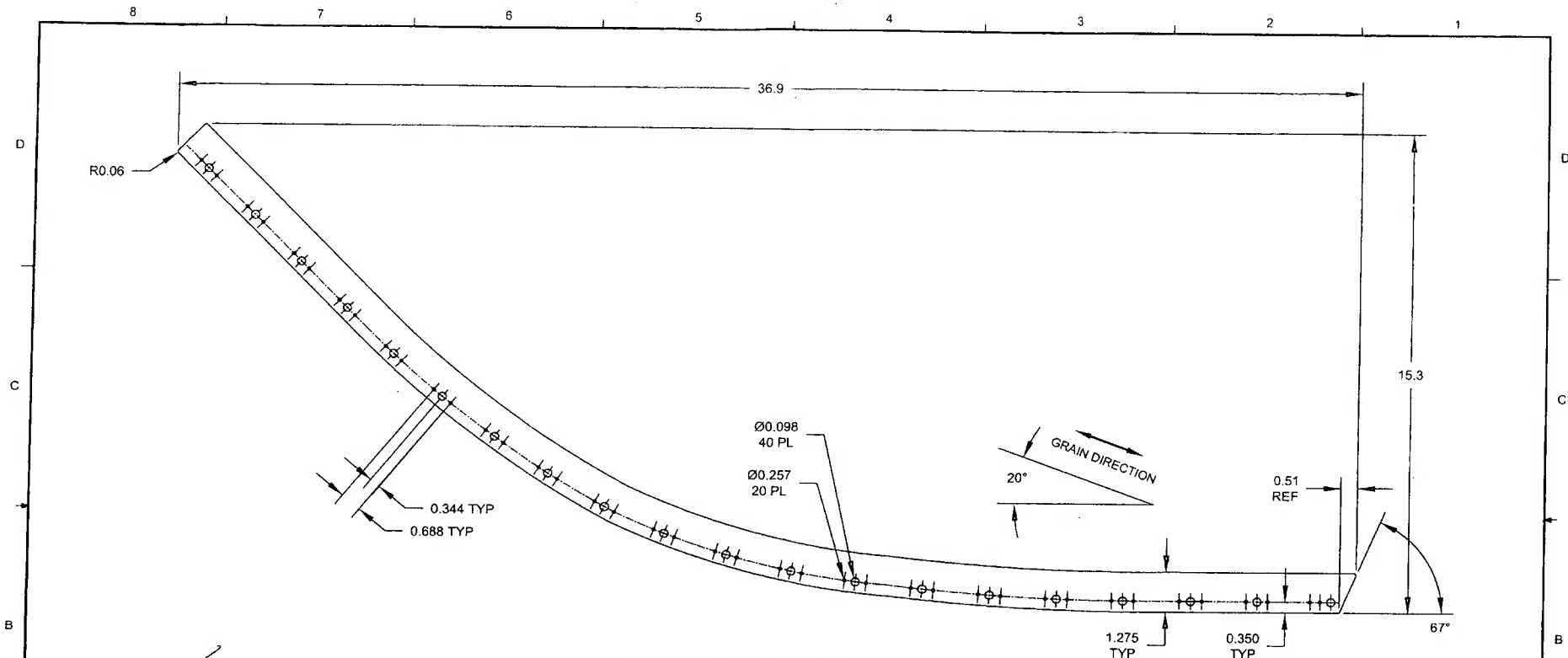
NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		



D4542-1 RETAINER, LH INNER
(LOWER)

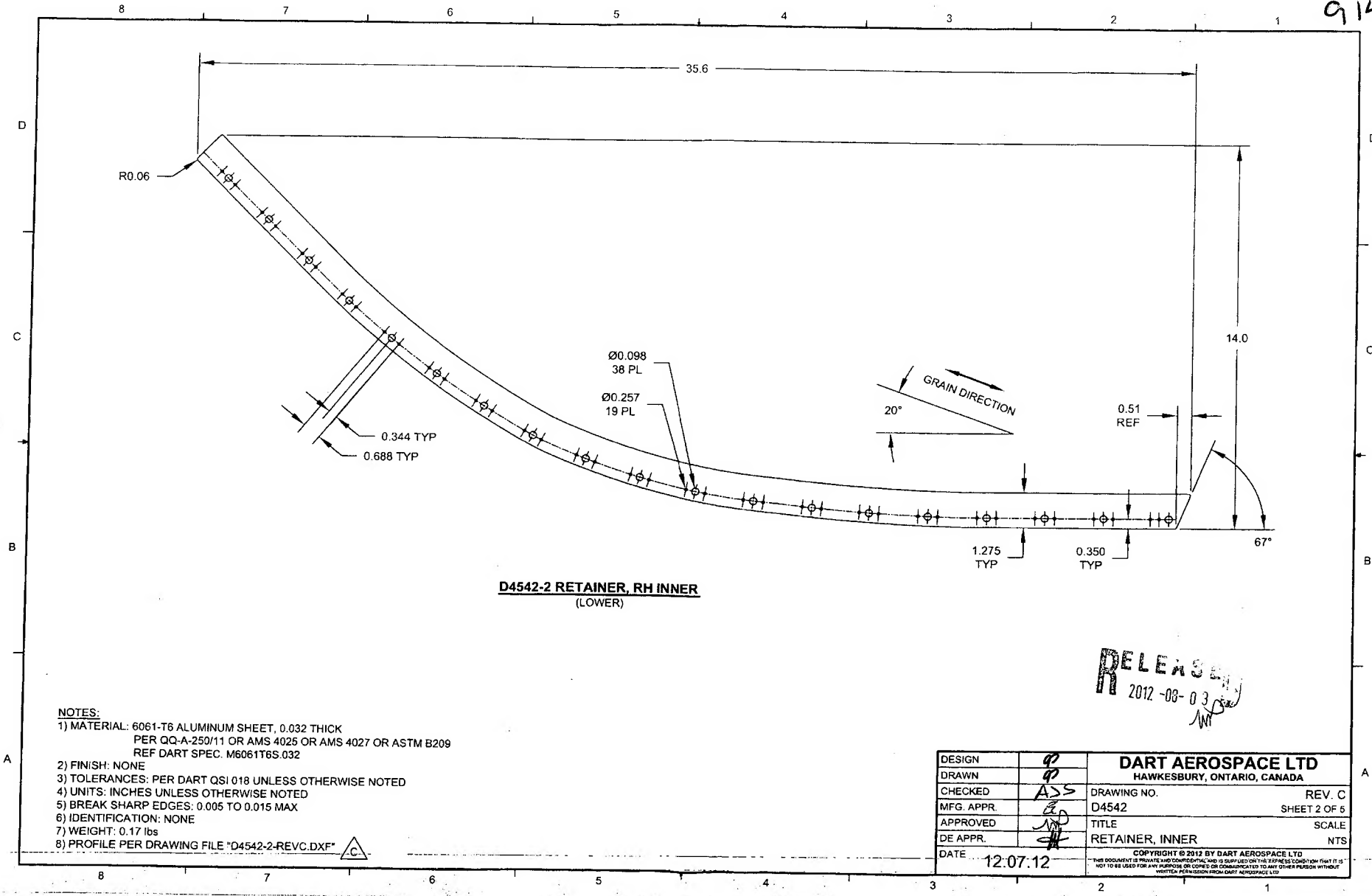
RELEASED
2012-08-03

- NOTES:**
- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.17 lbs
 - 8) PROFILE PER DRAWING FILE "D4542-1-REVC.DXF"

STOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
91458 MLJ
12-10-10

C	CORRECT (MIRROR) HOLE LOC. ON -7 (ZN C3-5)	CP	12.07.12
B	RMV FINISH & ADD HOLES (-1/-2/-3/-5/-7)	CP	12.04.20
A	ADD/MODIFY ORIENTATION MARK (C2-4, C5-6)	CP	12.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN	9	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	9		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	9	D4542	SHEET 1 OF 5
APPROVED	9	TITLE	SCALE
DE APPR.	9	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

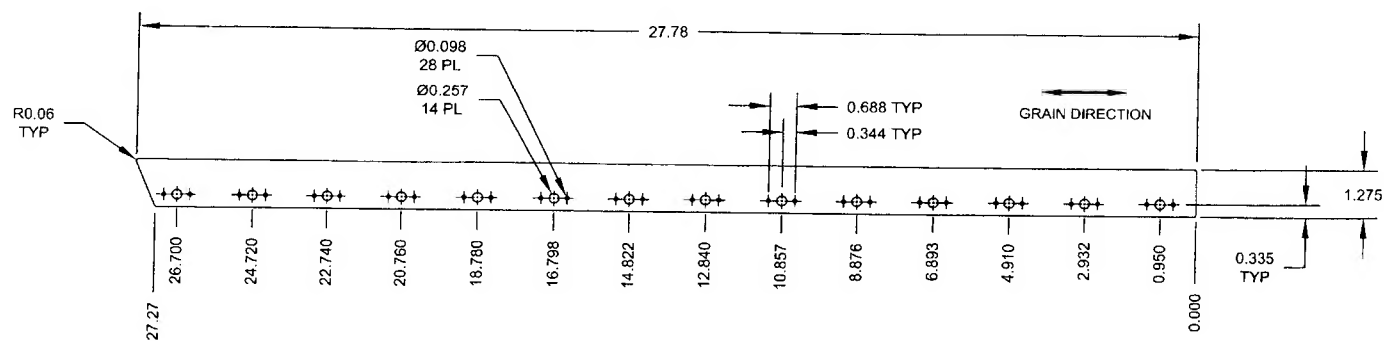
91458



RELEASED
 2012-08-03

DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	92	D4542	SHEET 2 OF 5
APPROVED	92	TITLE	SCALE
DE APPR.	92	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

91458



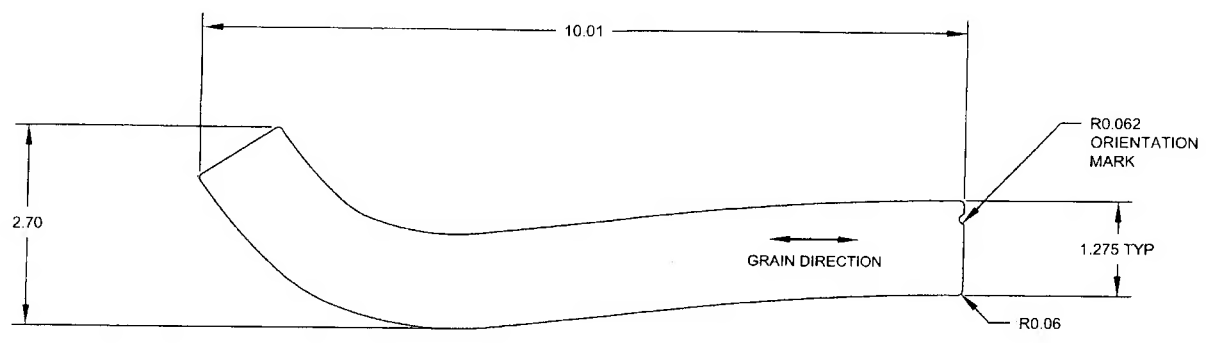
D4542-3 RETAINER, INNER
(SIDE)

RELEASED
2012-08-03

- NOTES:**
- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.11 lbs
 - 8) PROFILE PER DRAWING FILE "D4542-3-REV.C.DXF"

DESIGN	9	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	9		
CHECKED	AS	DRAWING NO.	REV. C
MFG. APPR.	9	D4542	SHEET 3 OF 5
APPROVED	9	TITLE	SCALE
DE APPR.	9	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS TO BE USED FOR THE PURPOSES OF THE CONTRACT ONLY. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

91458



D4542-5 RETAINER, INNER
(TOP CORNER)

RELEASED
2012-08-03

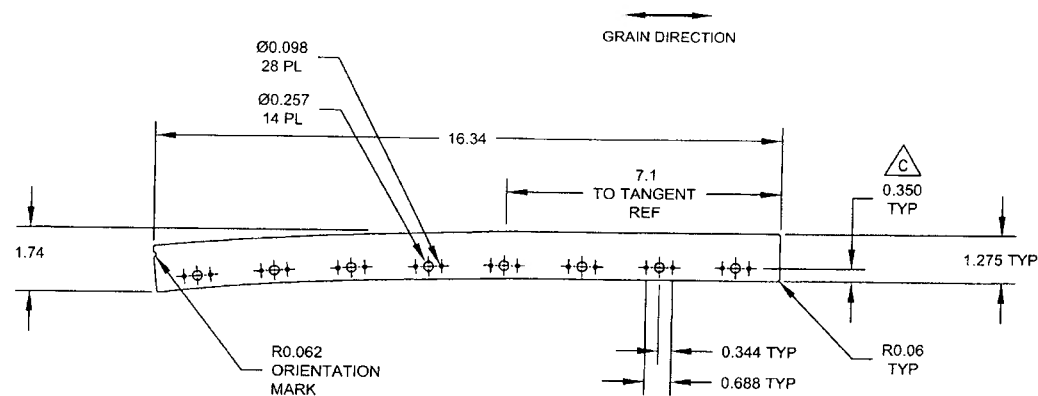
NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.04 lbs
- 8) PROFILE PER DRAWING FILE "D4542-5-REVC.DXF"



DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	E	D4542	SHEET 4 OF 5
APPROVED	JW	TITLE	SCALE
DE APPR.	JH	RETAINER, INNER	NTS
DATE	12.07.12	<small>COPYRIGHT © 2012 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

91458



D4542-7 RETAINER, INNER
(TOP)

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.07 lbs
- 8) PROFILE PER DRAWING FILE "D4542-7-REVC.DXF"



RELEASED
2012-03-03

DESIGN	90	DART AEROSPACE LTD	
DRAWN	90	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	90	D4542	SHEET 5 OF 5
APPROVED	90	TITLE	SCALE
DE APPR.	90	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

